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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

September 5, 2007

Ms. Shirley J. Olinger, Acting Manager
Office of River Protection
United States Department of Energy
P.O. Box 450, MSIN: H6-60
Richland, Washington 99352

Mr. William S. Elkins, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, MSIN: H4-02
Richland, Washington 99354

RECEIVED
SEP 10 2007
EDMC

Re: Submittal of Hanford Facility RCRA Permit Modification Notification Form 24590-LAW-PCN-ENV-06-014; Class 1 Modification to the Hanford Facility Dangerous Waste and Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit 10 (Waste Treatment and Immobilization Plant), WA7890008967

Dear Ms. Olinger and Mr. Elkins:

The Department of Ecology approves the referenced Class 1 Modification submitted August 9, 2007. The approved Hanford Facility RCRA Permit Modification Notification Form is enclosed.

Modification 24590-LAW-PCN-ENV-06-014 provides the updated Low Activity Waste (LAW) process flow diagram (24590-LAW-M5-V17T-P0011, Revision 1) for the LAW Vitrification Secondary Offgas Treatment System.

The parties agree that during the transition period from permit drawings to engineering source drawings, items not requiring an installation inspection or inclusion in the Independent Qualified Registered Professional Engineer report may be shown in phantom. Ecology is approving the design changes identified in the Permittees' submittal. However, decisions regarding the regulation of items shown in phantom will be made at a later date. At the end of the transition period, permit submittals will contain engineering source documents and will be incorporated into the permit as described in Ecology Publication # 07-05-006 (www.ecy.wa.gov/biblio/nwp.html).



Ms. Olinger and Mr. Elkins

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If there are any questions, contact me at 509-372-7882 or Tracy Gao at 509-372-7901.

Sincerely,



Brenda Becker-Khaleel
WTP Permit Writer
Nuclear Waste Program

aah/jc

Enclosure

cc electronic w/enc:

John Eschenberg, USDOE
Lori Huffman, USDOE
Tony McKarns, USDOE
Gae Neath, USDOE
Don Sommer, USDOE
William Taylor, USDOE
Brad Erlandson, BNI
Peggy Fisher, BNI
Stan Hill, BNI
Dennis Klein, BNI
Sandi Murdock, BNI
Phil Peistrup, WGI

cc w/enc:

H-0-8

Administrative Record: Tank Waste Treatment Requirements ✓
Environmental Portal
USDOE-ORP Correspondence Control

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Hanford Facility RCRA Permit Modification Notification Form

Part III, Operating Unit 10

Waste Treatment and Immobilization Plant

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Page 2 of 3: Hanford Facility RCRA Permit, Operating Unit 10, Waste Treatment and Immobilization Plant
Update LAW Vitrification Building Process Flow Diagram (PFD) for LAW Vit Secondary Offgas Treatment
(24590-LAW-M5-V17T-P0011) in Appendix 9.1 of the Dangerous Waste Permit.

Submitted by Co-Operator:

D. A. Klein
D. A. Klein

7/30/07
Date

Reviewed by ORP Program Office:

S. J. Olinger
S. J. Olinger

8/7/07
Date

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Hanford Facility RCRA Permit Modification Notification Form

Unit:

Waste Treatment and Immobilization Plant

Permit Part & Chapter:

Part III, Operating Unit 10

Description of Modification:

The purpose of the modification is to update a LAW process flow diagram (PFD) for the LAW vitrification secondary offgas treatment system, identified as 24590-LAW-M5-V17T-P0011, Rev. 0, located in Appendix 9.1 of the Dangerous Waste Permit (DWP).

Ecology is requested to approve the following changes to the subject PFD:

1. Note 12 is changed from: "Vessels must have the capability to be washed and to transfer the wash effluent or off-specification material to RLD-VSL-00003."
To: "Vessels must have the capability to be washed and to transfer the wash effluent or off-specification material to RLD-VSL-00003 (via floor drain LVP-FD-00001)."
2. Note 13 revised from: "Controlled by differential NH3 and NOX across LVP-SKID-00002 or inlet temperature."
To: "Controlled by differential NOX across LVP-SKID-00002 or inlet temperature."
3. Added Note 17 "This revision incorporated DCNs associated with the source drawing. LVP-SKID-00003 added per vendor design. Added "floor drain" to Note 12 for clarification. Changed offsheet connector from "LAW-P0016" to "LAW-00016". A permit version of 24590-LAW-M5-V17T-00016 will not be issued."
4. Corrected document number in Reference 2.
Revise from: "24590-PTF-M5-V17T-P0001, "Process Flow Diagram Legends & Symbols""
To: "24590-WTP-M5-V17T-P0001, "Process Flow Diagram Legends & Symbols""
5. Added Reference "11. (Deleted)", as Reference 11 was added to the source drawing, but is not applicable to the permit version.
6. Revised the valve for plant service water additions to LVP-TK-00001 from being normally open to being normally closed.
7. The portion of the transfer line shown in LVP-TK-00001, which goes to LVP-PMP-00002 A/B, was shown incorrectly and is being deleted. This does not affect the design of the system.
8. A reference to Note 12 is being added to the "Overflow to Berm" for LVP-TK-00001.
9. The plant item number for LVP-PMP-00001 A/B is changing to "LVP-PMP-00003 A/B" as a result of a pump flowrate change from 60 gpm to 200 gpm per vendor recommendation.
10. Revised non-permit affecting offsheet connector label for the 5M caustic solution from SHR-TK-00003 from: "LAW-P0016" to "LAW-00016". A permit version of the source will not be issued as the source drawing contains only systems associated with cold chemical product.
11. Revised non-permit affecting offsheet connector label from "Ammonia Vapor from AMR-VSL-00001/2" to "Ammonia Vapor from AMR-VSL-00003/4." The vessels are renumbered because they are being transferred to BOF.
12. Added a NOx indicator to waste stream LVP08 prior to entry into LVP-SKID-00001.
13. Revised the instrumentation on waste stream LVP26 prior to entering LVP-SKID-00002
Revised from the following indicators: NOx, VOC, temperature, and NH3.
To indicators for the following: HF, temperature, and HCL.
The NOx indicator is being moved to the carbon adsorber inlet as identified in Change #12. The VOC and NH3 indicators are being replaced with HF and HCL indicators to reflect the vendor design.
14. Added a NOx indicator to waste stream LVP23 prior to the temperature indicator in LVP-SKID-00002.
15. The plant item number for LVP-BLWR-00001 A/B is being corrected to "LVP-FAN-00001/2"

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consistent with the tag names in the vendor package.

16. LVP-FAN-00001/2 and associated air piping along with ammonia vapor from AMR-VSL-00003/4 is being split from LVP-SKID-00002 and is now its own (new) skid, LVP-SKID-00003. LVP-SKID-00003 is also added to the plant item number and descriptions at the top of the drawing.
17. Added a HEPA filter to LVP-SKID-00003 dilution air prior to LVP-FAN-00001/2 to depict the vendor design.
18. The bypass associated with LVP-HX-00001 has been reconfigured to indicate the vendor design.
19. The symbol for LVP-FAN-00001/2 is corrected from a centrifugal pump symbol to a fan symbol.
20. Bolded notes and reworded Note 16 to read: "The components shown on this drawing in phantom do not require Independent Qualified Registered Professional Engineer assessments of design or installation inspections by a qualified installation inspector in accordance with the DWP and/or Washington Administrative Code requirements."

Please replace the following in Appendix 9.1 of the Dangerous Waste Permit.

Appendix 9.1

Replace:	24590-LAW-M5-V17T-P0011, Rev. 0	With:	24590-LAW-M5-V17T-P0011, Rev. 1
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WAC 173-303-830 Modification Class: ^{1 2}

Please mark the Modification Class:

Class 1

Class ¹1

Class 2

Class 3

X

Enter Relevant WAC 173-303-830, Appendix I Modification citation number: A.1 and A.3

Enter wording of WAC 173-303-830, Appendix I Modification citation:

A.1. Administrative and informational changes

A.3. Equipment replacement or upgrading with functionally equivalent components (e.g., pipes, valves, pumps, conveyors, controls)

Modification Approved: ☒ Yes ☐ No (state reason for denial)

Reason for denial:

Reviewed by Ecology:

B. Becker-Khaleel 9/5/07
B. Becker-Khaleel Date

¹ Class 1 modifications requiring prior Agency approval.

² If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class '1, if applicable.